Amendments to the Drawings

The attached four sheets of drawings include changes to FIGS. 5, 6, 8a and 9. These four sheets, which includes FIGS. 5-10, replaces the original sheets including FIGS. 5-10.

In FIG. 5, the reference for Center Axis, CA, is added.

In FIG. 6, the angles α and β are added.

In FIG. 8a, the reference for Center Axis, CA, is added.

In FIG. 9, the reference for Center Axis, CA, is added.

Attachment: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS

This responds to the **September 8, 2009** Office Action.

In the Office Action, claims 1-35 are noted as pending in the application, claims 1-35 stand rejected, no claims are objected to and no claims are allowed. No claims have been withdrawn from consideration.

Applicant notes that the present application is a Section 371 application from a PCT application. The claims 1-33 were not amended under PCT Article 19, but the claims in the PCT application were amended during the International Examination to claims 1-35. Upon entering the National Stage, Applicant filed a Preliminary Amendment to file claims 1-35 from the PCT International Examination.

In the present application, a Notice of Non-Compliant Amendment was mailed June 16, 2009, addressing the Preliminary Amendment with claims 1-35. Interpreting the Notice as permitting extensions of time for the Primary Amendment, such amendment being a non-final amendment, Applicant was preparing to submit new claims when the September 8, 2009 Office Action was received ("the present Office Action"). The present Office Action examines claims 1-35 from the Preliminary Amendment, even though the June 16, 2009 Notice indicates that if no response is filed, examination will proceed on claims 1-33.

During a September 24, 2009 telephone conference with the Examiner, which Applicant appreciates, Applicant asked about the possibility of filing Applicant's new claims and withdrawing the present Office Action. Applicant indicated that the new claims were about to be filed when the present Office Action was received, and that the present Office Action should have examined claims 1-33 instead of amended claims 1-35. Applicant was hoping to avoid a constructive restriction/election when the new claims are filed, but in either case, it is nonetheless presently believed that the new claims are in fact directed to the species examined in the present Office Action. The outcome of the telephone conference was that the present Office Action would not be withdrawn and that Applicant should file the new claims.

For these reasons, claims 1-35 are canceled herein without prejudice to pursuing such claims at a later time, and new claims 36-80 are added. Claim 36 incorporates

elements of claim 1 and claim 17. Claims 73 and 74 are method claims, replacing method claim 32. Therefore, the new claims are directed to species already examined in the pending Office Action.

Drawings

The drawings are objected to under 37 CFR 1.83(a) as not showing all the features recited in the claims. Replacement drawings are filed simultaneously here with, which are believed to address the issues raised in the Office Action relating to the longitudinal axis, and the angles of 10° and 30 and 45°. It is noted that new claim 34 recites, among other things, a longitudinal axis and an angle of 10° to a plain orthogonal to the longitudinal axis. New claim 37 recites, among other things, angles between 30 and 45°. New claim 55 recites, among other things, a "varied width" but not a "variable width", and new claim 65 recites "flutes" but omits the language objected to in the present Office Action.

The drawings are also objected to as failing to show a recessed instep being adjacent to an inside border of a standing ring and being displaced higher within the container than an upper border of the pressure panel. New claim 67 has similar terminology. It is believed that the previously-filed drawings properly show the structure of the recessed instep 8 higher within the container than the pressure panel, such as in the manner shown in FIG. 8b. In that Figure, the decoupling structure 13 does not form part of the pressure panel.

In view of the foregoing, it is believed that the drawing objections have been properly addressed.

Applicant respectfully requests an indication that the drawings have been approved.

Specification

Amendments are made to the Specification to correct printing errors found in the published US application publication. The proper text is found in the original PCT publication, from which these amendments are taken. No new matter is added.

The specification is also amended to add references to the angles shown in FIG. 6.

Rejections

Indefinite Rejections

Claims 1-35 are rejected under 35 USC 112, second paragraph, as being indefinite. It is believed that new claims 36-80 that Applicant was going to file before receiving the present Office Action, to the extent they adopt claim terminology from claims 1-35, have eliminated any indefiniteness in the Preliminary Amendment claims 1-35. For example, phrases such as "adapted to" and "being capable" are no longer used, and the term "configured" is used to provide structural limitations. Therefore, it is believed that the new claims meet the requirements of Section 112.

Section 103 Rejections

In the Office Action, Claims 1-3, 7, 8, 15, 17, 18, 29, and 31-35 insofar as they are definite, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurschman '655. According to the Office Action, Hurschman teaches a plastic container with a top portion having an opening as near 19 with a closure15, a sidewall portion 25 and a collapsible base portion 12, having control portion 29 and a initiator portion 26 which responds to pressure before the control portion to collapse as shown in figures 3 and 4. Member 28 may be considered a hinge portion while the standing ring is formed at the bottom of 27 as shown in figure.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of Owsen '902. According to

the Office Action, to have optionally formed the initiator and control portions of substantially the same angle would have been obvious in view Owsen.

Claims 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied to claim 1 above, and further in view of Chang '510. According to the Office Action, to have provided the base portion with flutes in the manner of Chang would have been obvious.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 25 above, and further in view of Tauschinski et al. '002. As stated in the Office Action, to have optionally formed the folding base portion with concave flutes would have been obvious in view of Tauschinski et al. as shown in Figure 8 for example.

Claims 1, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker '789 in view of Hurschman '655. According to the Office Action, to have provided the recessed base portion of Parker with the initiator and control portions taught by Hurschman for ease of reversal would have been obvious.

These rejections are respectfully traversed for the following reasons.

Applicant's Disclosure

Consider first Applicant's disclosure.

Applicant discloses a container structure for removal of vacuum pressure, for example that might be incorporated into a hot-fill PET container or bottle. The container may include a central axis, such as that indicated at CA in amended FIGS. 5, 8 and 9, and an upper portion such as at 12 having an opening into the container (see, for example, FIG. 1). The container may also include a body portion such as may include a side wall 9 extending from the upper portion to a lower portion. The lower portion includes a base portion 2 closing off an end of the container. In one example, such as that represented in FIGS. 5 and 6, the container includes a substantially transversely oriented pressure panel in the lower portion, such as indicated at 11. In this example, the pressure panel includes a portion inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis CA. An example plane is represented in side

view in FIGS. 6-7 by the line B-B. It is the angular orientation of the plane that is important rather than its placing. In the present example as depicted in FIGS. 6-7, the pressure panel portion 11 is configured to be capable of folding from the inclined position, such as that represented in FIG. 6, to an inverted position, such as that represented in FIG. 7, to change an internal volume within the container. In the present example represented in FIGS. 6-7, the folding of the pressure panel portion reduces the internal volume within the container if an initial configuration of the container is represented in FIG. 6 and the subsequent configuration of the container is represented in FIG. 7. In another example, if the initial configuration of the container is represented in FIG. 7 and the subsequent configuration of the container is represented in FIG. 6, the folding of the pressure panel portion increases the internal volume within the container.

In one example described in the Specification, when the panel 11 is inverted by mechanical compression, it will undergo an angular change that is double that provided to it. For example, if the conical portion 5 is set to 10°, it will provide a panel change equivalent to 20°. See, for example, Specification page 13, starting at line 4. However, it has been found that in some containers, an angle of 10° provides inadequate vacuum compensation. Therefore, steeper angles may be preferred for such containers. As noted in Applicant's Specification, a control portion 5 of the panel may be set with an angle varying between 30° and 45°. In another example, a control portion 5 may be set at a selected angle, and an initiator portion 1 may have a lesser angle, for example at least 10° less than the control portion. See, for example, Applicant's Specification, starting at page 13, line 4.

As noted in Applicant's Specification, panel inversion can occur under an externally applied mechanical force. See, for example, FIGS. 11 and 12.

In another example, the container may also include a decoupling structure, for example that depicted at 13 in FIGS. 1-7. A decoupling structure may provide a hinge joint to the structure of the vacuum panel and the lower side wall, and may provide for a larger range of longitudinal movement of a vacuum panel than would occur if the panel was coupled to the side wall by way of ribs, for example. See, for example, Applicant's Specification, page 10, starting at line 13.

Cited Prior Art

Consider now the applied art. Hurschman, US patent number 3,174,655, shows a drop or spray dispenser having an inverted cup 11 with a circular bottom 12 and a circular diaphragm 13. The side wall of the cup includes a flexible upper portion 26 and a lower portion 27 of a larger diameter that is relatively more rigid and inflexible. The upper sidewall portion 26 is conical, tapered with a slight outward and downward inclination from the upper end wall 12, while the lower sidewall portion 27 is substantially cylindrical. The upper and lower portions of the sidewall are integrally joined by a short, thin, circumferential shoulder 28, and the external, peripheral notch 29 is formed in the annular zone mergence of the sidewall with the upper end wall 12. See, column 4, lines 35-46.

The relative wall thicknesses of the upper and lower side wall portions 26 and 27 of the ampoule shell are such that, when axially directed pressure is applied to the upper and lower end walls 12 and 13, the relatively rigid and inflexible lower side wall portion 27 will remain substantially undistorted, and the more flexible, upper side wall portion 26 will fold and progressively roll on itself until the top section of the body, designated T in FIG. 1, is inverted so as to be within the confines of the lower side wall portion, designated B. The upper side wall portion 26 is made as thin as possible to permit an easy folding and rolling action while still retaining sufficient strength to resist fracture or bursting and tearing. It is also preferred to taper this portion of the side wall from a maximum thickness at its upper end to a minimum thickness at its lower end. See, column 4, lines 47-62.

The lower portion 27 of the side wall of the ampoule shell may have a thickness approximately twice the maximum thickness of the upper side wall portion 26. The shoulder 28 between the upper and lower portions is no thicker and is preferably slightly thinner than the minimum thickness of the upper side wall portion so as to define a peripheral zone of maximum flexibility at which collapsing of the side wall is controllably initiated. See, column 4, lines 63-70.

Hurschman lacks a container lower portion with at least one substantially transversely oriented pressure panel. Hurschman also lacks a portion of a pressure panel inclined at angle of more than 10° relative to a plane orthogonal to a longitudinal axis. Clearly, Applicant has taught inventions patentable over Hurschman.

Owsen, US patent number 2,880,902, teaches a collapsible article such as a drinking cup having a plurality of annular stepped sections 12 alternating with stepped sections 14, all of which are successively decreasing in diameter. The walls of the sections 12 are relatively thin as compared to the walls of the sections 14, and they are integrally joined to one another and to the bottom 16. Because sections 12 are thinner than the sections 14, they are more flexible and consequently when the top of the cup is moved toward the bottom, the sections 12 reverse themselves as the sections 14 are moved into telescoped relation with each other. The sections 12 are inverted or turned inside out between the sections 14 when they are in telescoped relation, as shown in FIG. 2. Owsen fails to supply any of the deficiencies lacking in Hurschman. Even if the sections 12, 14 are considered as initiator and control portions, respectively, which we disagree with, they are oriented at an angle parallel (and not orthogonal) to the longitudinal axis and contained within the side wall. Clearly, Applicant has taught inventions patentable over Owsen.

Chang, US patent number 4,134,510, shows a bottle having a ribbed bottom. A pre-formed container is initially expanded against a composite mold surface defined by the end faces of a plurality of concentric tubes surrounding a central actuating rod. The rod and the tubes are initially telescopically positioned to define a composite concave surface, so a first convex bottom is blown. Subsequently, the rod and tubes are actuated telescopically to progressively invert the convex bottom to a concave shape. The end faces of the tubes may be grooved to define reinforcing ribs in the concave bottom wall, if desired. Nothing in Chang teaches the elements missing from Hurschman.

Tauschinski teaches containers for medicines. The Office Action sites to FIG. 8 which is described as having a bottom "b" pressed in, and beads "o" are located one above the other in reversed order. The bead "c" forms the edge on which the container

can stand. See, column 2, lines 45-48. Tauschinski is cited for the proposition of having concave flutes, but it is not clear what structures are referred to as "flutes". In any case, nothing in Tauschinski teaches the elements missing from Hurschman.

Parker, US patent number 3,819,789, shows a method and apparatus for blow molding axially deformable containers. The bottle to be formed has a configuration of multiple hollow thin wall spirals 10 which are deflectable together by relatively twisting the top and bottom of the bottle so that it compresses axially to expel its contents. During the final stages of expulsion, the push-up or expeller 11 forces substantially all of the contents from the container. In the container forming sequence, the “parison” is placed between mold sections which are then closed to cut off the parison and form the container with the bottom extension 11a which, as shown in FIG. 2, tapers toward its lower end. Forming rod portions engage and push the projection 11a upwardly into the bottle to form the push-up, expeller or upwardly extending protuberance 11 which, as shown in FIG. 3, tapers toward its upper end and does not conform in shape with the vertically extending walls of the rod portions 25. Parker fails to teach or suggest a substantially transversely oriented pressure panel portion configured to be capable of folding from an inclined position to an inverted position. Additionally, Parker fails to teach or suggest such a pressure panel having a portion being inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis. Clearly, Applicant has taught inventions patentable over Parker.

Claims

Consider now the claims in the application.

Claim 36 is an independent apparatus claim and recites in part:

> "at least one substantially transversely oriented pressure panel located in the lower portion, the pressure panel comprising a portion being inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis and the pressure panel portion being configured to be capable of folding from the inclined position to an inverted position to change an internal volume within the container."

None of the applied references taken singly or in combination teach or suggest the claimed combination, the recited elements quoted above, or the transversely oriented pressure panel located in the lower portion, the pressure panel comprising a portion being inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis and the pressure panel portion being configured to be capable of folding from the inclined position to an inverted position.

Claims 37-72 are dependent directly or indirectly from independent claim 36 and are asserted as being patentable for the same reasons as discussed with respect to claim 36, for the combinations in the dependent claims as well as for the additional limitations recited in the dependent claims.

Claim 73 is an independent apparatus claim and recites in part:

> "a standing support that provides a substantially flat rigid surface, the base including a central annular flexible portion that is configured to flex from a convex to a concave configuration relative to a support surface; . . . wherein a transition between the standing support and the central flexible portion is configured to be permitted to flex, and the central flexible portion is configured to contract upwardly relative to the standing support"

None of the applied references taken singly or in combination teach or suggest the claimed combination, the recited elements quoted above, or the standing support and the transition as recited.

Claim 74 is an independent method claim and recites in part:

> "filling a container with a liquid, the container having a longitudinal axis, . . . the container having at least one substantially transversely oriented pressure panel located in the lower portion, the pressure panel comprising a portion being or being configurable to be outwardly inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis;
>
> "capping and/or sealing the container; and
>
> "causing a force to be applied to the container to fold the pressure panel from the inclined position to an inverted position to cause a rise in pressure within the container."

None of the applied references taken singly or in combination teach or suggest the claimed combination, the recited elements quoted above, or filling a container with a liquid, the container having a longitudinal axis, the container having at least one substantially transversely oriented pressure panel located in the lower portion, the pressure panel comprising a portion being or being configurable to be outwardly inclined at an angle of more than 10° relative to a plane orthogonal to the longitudinal axis.

Claims 75-80 are dependent directly or indirectly from independent claim 74 and are asserted as being patentable for the same reasons as discussed with respect to claim 74, for the combinations in the dependent claims as well as for the additional limitations recited in the dependent claims.

Reconsideration of the application and claims in view of the foregoing amendments and remarks is respectfully requested. Early notice of allowance thereof is earnestly solicited.

If the Examiner does not believe the foregoing amendments place the application in a condition for allowance, Applicants respectfully request the courtesy of a telephone interview to discuss the claims.

This response is being filed with a payment for A Three-Month Extension of Time.

The Director is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 50-0655. Please charge any omissions or deficiencies that may be due or credit any overpayments to Deposit Account No. 50-0655.

Respectfully submitted,

Dated: March 8, 2010

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